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(21)Application number: 2000-319882 (71)Applicant: MATSUSHITA ELECTRIC IND CO LTD

(22)Date of filing: 19.10.2000 (72)Inventor: MIYAWAKI HIROSHI

(54) DATA DISTRIBUTION SYSTEM

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a data distribution system where an information providing device can distribute data suitable for specifications of an information terminal and proper charging processing can be carried out for the distributed data.

SOLUTION: The data distribution system consists of the information terminal that automatically transmits its own specification in transmitting an information providing request to request information distribution and of the information providing device that receives the information providing request from the information terminal and the

specifications of the information terminal, converts data corresponding to the received information providing request into data in matching the specifications of the information terminal, transmits the converted data to the information terminal, and decides a billing amount depending on contents of the data transmitted to the information terminal so as to impose charging on an information user.

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CLAIMS

[Claim(s)]

[Claim 1] In the data distribution system which consists of an information terminal which requires informational distribution, and information offer equipment which offers information to said information terminal. The information terminal which transmits the specification of an information terminal automatically in case the information offer demand which requires informational distribution is transmitted. With said information offer demand transmitted from said information terminal, and the receive section which receives the specification of said information terminal. The data accumulation section which carries out are recording management of the various information data, and the data detecting element which detects the data corresponding to said information offer demand which said receive section received from said data accumulation

section, The data-conversion section which changes the data detected by said data detecting element so that it may agree in the specification of said information terminal which said receive section received, The data distribution system characterized by what is consisted of information offer equipment equipped with the transmitting section which transmits the data changed by said data-conversion section to said information terminal.

[Claim 2] In the data distribution system which consists of an information terminal which requires informational distribution, and information offer equipment which offers information to said information terminal The information terminal which transmits the information terminal ID of an information terminal automatically in case the information offer demand which requires informational distribution is transmitted, The information terminal database which makes a pair the specification of the information terminal ID and an information terminal, and carries out are recording management, With the receive section which receives said information offer demand transmitted from said information terminal, and said information terminal ID, and detects the specification of the information terminal corresponding to said information terminal ID from said information terminal database The data accumulation section which carries out are

recording management of the various information data, and the data detecting element which detects the data corresponding to said information offer demand which said receive section received from said data accumulation section, The data-conversion section which changes the data detected by said data detecting element so that it may agree in the specification of said information terminal which said receive section detected, The data distribution system characterized by what is consisted of information offer equipment equipped with the transmitting section which transmits the data changed by said data-conversion section to said information terminal.

[Claim 3] The data distribution system by which said information offer equipment is characterized by what the amount of accounting is further determined according to the contents of the data transmitted to said information terminal, and it has the accounting Management Department which charges to an information user for in claim 1 or a data distribution system according to claim 2.

[Claim 4] The data distribution system characterized by what said information offer equipment is further equipped with the customer database which carries out are-recording management of an information user's use hysteresis in a data distribution system according to claim 3, and said accounting Management

Department determines the amount of accounting according to the contents of the data transmitted to use hysteresis and said information terminal of the information user stored in said customer database, and charges to an information user.

[Claim 5] The data distribution system by which the specification of an information terminal is characterized by what it has the number of pixels, gradation, compressibility, the compression approach, refreshable number of sheets, or at least one information on memory capacity for when the object of the information offer demand which transmits from said information terminal to said information offer equipment is static-image data in a data distribution system given in any of claim 1 thru/or claim 4 they are.

[Claim 6] The data distribution system by which the specification of an information terminal be characterize by what it have the number of pixels , gradation , compressibility , the compression approach , playback time amount , or at least one information on memory capacity for when the object of the information offer demand which transmit from said information terminal to said information offer equipment be dynamic-image data in a data distribution system given in any of claim 1 thru/or claim 4 they be .

[Claim 7] The data distribution system by which the specification of an information terminal is characterized by what it has a sampling rate, a frequency band, compressibility, the compression approach, playback time amount, or at least one information on memory capacity for when the object of the information offer demand which transmits from said information terminal to said information offer equipment is voice data in a data distribution system given in any of claim 1 thru/or claim 4 they are.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the data distribution system which enables distribution of the image data of the optimal quality level for the specification of the information terminal which an information user uses especially, and music data about the distribution system of data.

[0002]

[Description of the Prior Art] In recent years, various information, such as image data and music data, can come to hand easily through the Internet. Although it was common to have reproduced after accessing from a personal computer to an image server or a music server and downloading data as an acquisition means of this image data and music data conventionally, recently, the information terminal which reproduces the data connected and downloaded to the network as it is developed one after another, and diversification of the

specification of the information terminal which an information user has is progressing.

[0003] for example, receive the image data and music data which were distributed on the Internet, and as an information terminal to reproduce The radio station which accesses the Internet via the telephone line and is located in the whole world is accessed. Access the Internet via the Internet radio which plays voice and music, and a local area network in the company, and high resolution static-image data are accessed by the big screen. There are a printer which carries out direct printing playback of the static image, Internet television which accesses the Internet via a cable modem, accesses two or more dynamic-image servers, and reproduces a dynamic image.

[0004] However, the image data distributed through the Internet and music data are saved in the form of a variety of data for every server, and the data format concerned does not necessarily agree with the specification of the information terminal which an information user uses.

[0005] Furthermore, the specification of the information terminal which an information user uses was also diversified, and the trouble that the format of the data sent from a server and the specification of the information terminal which

reproduces the data concerned may not be unable to be in agreement, and may be unable to be reproduced had arisen.

[0006] Then, it corresponds to diversification of the regenerative function of such an information terminal, some of image data and music data providers hold two or more image data and voice data of data format which are different by the server side, and the system offered according to the specification of the information terminal which an information user uses is proposed.

[0007] Moreover, data are distributed and the system to charge is proposed, after changing data format into invention indicated by JP,6-223122,A and JP,9-181910,A by the server side so that it may agree in the specification of the information terminal specified by an information user.

[0008]

[Problem(s) to be Solved by the Invention] However, in a system which was mentioned above, whenever an information user downloads data, the specification of an information terminal must be specified, and it is very complicated. Moreover, when it was necessary to always memorize the function and specification of an information terminal to be used correctly, and to input correctly, the information user had the problem that the same contents had to be

inputted repeatedly, although the information user had accessed the same server using the same information terminal.

[0009] Moreover, when an information user specified or was mistaken in the specification of an information terminal, the image data and the music data of low quality which are less than the case where the image data and music data of high quality level which cannot reproduce an information terminal are sent, and the tariff beyond the need must be paid, and the ability to regenerate an information terminal were sent, and there was a trouble that the function of an information terminal may fully be unable to be utilized.

[0010] Furthermore, when the same information user was using two or more information terminals, in spite of the information user's having already downloaded image data and music data at the information terminal of 1 and having charged him, when he downloaded the same data again using other information terminals, there was a trouble that a special tariff was always charged.

[0011] In case this invention solves the above-mentioned problem and distribution of image data and music data is required using an information terminal from an information user While making it possible to distribute the

image data which was suitable for the specification of an information terminal from the server side, and music data, without inputting the specification of an information terminal each time and transmitting It aims at offering the data distribution system which can be charged according to the contents of the data distributed for every information user.

[0012]

[Means for Solving the Problem] In order to solve said technical problem, the data distribution system concerning this invention In the data distribution system which consists of an information terminal which requires informational distribution, and information offer equipment which offers information to said information terminal The information terminal which transmits the specification of an information terminal automatically in case the information offer demand which requires informational distribution is transmitted, With said information offer demand transmitted from said information terminal, and the receive section which receives the specification of said information terminal The data accumulation section which carries out are recording management of the various information data, and the data detecting element which detects the data corresponding to said information offer demand which said receive section

received from said data accumulation section, It consists of information offer equipment equipped with the data-conversion section which changes the data detected by said data detecting element so that it may agree in the specification of said information terminal which said receive section received, and the transmitting section which transmits the data changed by said data-conversion section to said information terminal.

[0013] Moreover, the data distribution system concerning this invention In the data distribution system which consists of an information terminal which requires informational distribution, and information offer equipment which offers information to said information terminal The information terminal which transmits the information terminal ID of an information terminal automatically in case the information offer demand which requires informational distribution is transmitted, The information terminal database which makes a pair the specification of the information terminal ID and an information terminal, and carries out are recording management, With the receive section which receives said information offer demand transmitted from said information terminal, and said information terminal ID, and detects the specification of the information terminal corresponding to said information terminal ID from said information terminal

database. The data accumulation section which carries out are recording management of the various information data, and the data detecting element which detects the data corresponding to said information offer demand which said receive section received from said data accumulation section. It consists of information offer equipment equipped with the data-conversion section which changes the data detected by said data detecting element so that it may agree in the specification of said information terminal which said receive section detected, and the transmitting section which transmits the data changed by said data-conversion section to said information terminal.

[0014] Moreover, said information offer equipment determines the amount of accounting further according to the contents of the data transmitted to said information terminal, and the data distribution system concerning this invention is equipped with the accounting Management Department which charges to an information user.

[0015] Moreover, said information offer equipment is further equipped with the customer database which carries out are recording management of an information user's use hysteresis, said accounting Management Department determines the amount of accounting according to the contents of the data

transmitted to use hysteresis and said information terminal of the information user stored in said customer database, and the data distribution system concerning this invention is charged to an information user.

[0016] Moreover, when the object of the information offer demand which transmits the data distribution system concerning this invention from said information terminal to said information offer equipment is static-image data, the specification of an information terminal has the number of pixels, gradation, compressibility, the compression approach, refreshable number of sheets, or at least one information on storage capacity.

[0017] Moreover, when the object of the information offer demand which transmits the data distribution system concerning this invention from said information terminal to said information offer equipment is dynamic-image data, the specification of an information terminal has the number of pixels, gradation, compressibility, the compression approach, playback time amount, or at least one information on storage capacity.

[0018] Moreover, when the object of the information offer demand which transmits the data distribution system concerning this invention from said information terminal to said information offer equipment is voice data, the

specification of an information terminal has a sampling rate, a frequency band, compressibility, the compression approach, playback time amount, or at least one information on storage capacity.

[0019]

[Embodiment of the Invention] It explains referring to a drawing about the data distribution system concerning this invention hereafter. In addition, the gestalt of each operation shown here is an example to the last, and is not necessarily limited to the gestalt of this operation.

[0020] (Gestalt 1 of operation) The data distribution system by the gestalt 1 of operation of this invention enables distribution of the image data of the optimal quality level for the information terminal which an information user uses, and music data by transmitting the specification of an information terminal from an information terminal automatically to a data-conversion server.

[0021] Below, the data distribution system by the gestalt 1 of this invention is explained at a detail using drawing 3 from drawing 1 . Drawing 1 is the block diagram showing an example of the data distribution system by the gestalt 1 of operation of this invention. The distribution system of data consists of an information terminal 11 which an information user uses, and information offer

equipment 12 which distributes information to an information user in drawing 1 .

[0022] While performing the information offer demand required as the information terminal 11 being connected with information offer equipment 12 through a communication line, and distributing information, such as music data and image data, to information offer equipment 12, the specification of the information terminal 11 concerned is automatically transmitted to information offer equipment 12. Moreover, the data concerned are received when the information on image data, music data, etc. demanded from information offer equipment 12 is distributed. In addition, not only the telephone line with a general communication line but various dedicated lines, ISDN circuits, etc. are included here.

[0023] moreover, when the data which show the format of data which the information terminal 11 requires, and require it are static-image information, the specification of an information terminal When the data which have and require information, such as the number of pixels, gradation, compressibility, the compression approach, refreshable number of sheets, and memory capacity, are dynamic-image information When the data which have and require information, such as the number of pixels, gradation, compressibility, the

compression approach, playback time amount, and memory capacity, are speech information, it has information, such as a sampling rate, a frequency band, compressibility, and the compression approach. In addition, the specification of these information terminals is stored in the memory (not shown) which an information terminal has beforehand, and is automatically transmitted to information offer equipment 12 at the time of transmission of an information offer demand.

[0024] On the other hand, information offer equipment 12 consists of a receive section 101, the data detecting element 102, the data accumulation section 103, the data-conversion section 104, the accounting Management Department 105, an accounting database 106, and the transmitting section 107. A receive section 101 receives the information offer demand transmitted from the information terminal 11, and the specification of an information terminal, and an information offer demand is outputted to the data detecting element 102, and it outputs the specification of an information terminal to the data-conversion section 104, respectively.

[0025] The data detecting element 102 receives an information offer demand, detects the data corresponding to an information offer demand out of the data

accumulation section 103, and outputs the detected data to the data-conversion section 104. The data accumulation section 103 carries out are recording management of the various information data.

[0026] While the data-conversion section 104 changes data into the data format according to the specification of the information terminal which the receive section 101 received and outputs the data corresponding to the information offer demand outputted from the data detecting element to the transmitting section 107 The accounting information which is the information about the contents of data transmitted to the information terminals 11, such as a class of data before conversion, the amount of data and the format of the data after conversion, and use time, and is the information used for the decision of the amount of accounting is outputted to the accounting Management Department 105.

[0027] The accounting Management Department 105 determines the amount of accounting using the accounting data table stored in the accounting database 106 based on said accounting information outputted from the data-conversion section 104, and collects the amount of accounting from the user who is using the information terminal 11 using approaches, such as electronic banking.

[0028] The transmitting section 107 transmits the data changed into the data

format according to the specification of an information terminal by the data-conversion section 104 to the information terminal 11. In addition, the amount of accounting determined as coincidence by the accounting Management Department 105 may be made the configuration of which a user is notified.

[0029] Next, actuation is explained. Actuation of the information offer equipment 12 started by transmitting the specification of the information terminal 11 to an information offer demand and an information terminal to below is explained using drawing 2 . Drawing 2 is a flow chart for explaining an example of actuation of the information offer equipment in the data distribution system by the gestalt 1 of operation of this invention.

[0030] (S101) A receive section 101 receives the specification of the information offer demand from the information terminal 11, and an information terminal. At this time, the information offer demand transmitted from the information terminal 11 is outputted to the data detecting element 102, and the specification of an information terminal is outputted to the data-conversion section 104.

[0031] (S102) Based on the information offer demand transmitted from the information terminal 11, from the inside of the data accumulation section 103,

the information detecting element 102 searches the data corresponding to an information offer demand, and outputs the data corresponding to the information offer demand which searched to the data-conversion section 104.

[0032] (S103) The data-conversion section 104 judges whether it has agreed with the specification of the information terminal with which the format of the data detected by the information detecting element 102 and the data detected by the information detecting element 102 using the specification of the information terminal received by the receive section 101 was received by the receive section 101. Consequently, if it has agreed with the specification of an information terminal and will not have gone and agreed to step S104, it goes to step S105.

[0033] (S104) When the format of the detected data has agreed with the specification of an information terminal, while outputting the data concerned to the transmitting section 107 as it is, the accounting information which is the information about the contents of data transmitted to the information terminal 11 is outputted to the accounting Management Department 105.

[0034] (S105) When the format of the detected data has not agreed with the specification of an information terminal, the data concerned are changed into the data format which agrees with the specification of an information terminal, and

while outputting the changed data to the transmitting section 107, the accounting information which is the information about the contents of data transmitted to the information terminal 11 is outputted to the accounting Management Department 105.

[0035] (S106) The accounting Management Department 105 determines the amount of accounting using the accounting data table stored in the accounting database 106 based on the accounting information which is the information about the contents of data transmitted to the information terminal 11 outputted from the data-conversion section 104. In addition, the determined amount of accounting is collected from the user of the information user slack information terminal 12 using approaches, such as electronic banking.

[0036] (S107) The transmitting section 107 transmits the data corresponding to the specification of the information terminal outputted from the data-conversion section 104 to the information terminal 11, and ends processing.

[0037] Next, an example of the decision method of the amount of accounting by the accounting Management Department 105 of information offer equipment 12 is explained to a detail using drawing 1 , drawing 3 , and drawing 4 . If the accounting information which is the information about the contents of data

transmitted to the information terminal 11 is outputted from the data-conversion section 104, the accounting Management Department 105 will determine the amount of accounting using the accounting data table stored in the accounting database 106.

[0038] In addition, it consists of a class of data before accounting information changing, and a format of the data after conversion, and explains here taking the case of the case where the amount of accounting is determined using the accounting data table stored in the accounting database 106 based on the accounting information concerned.

[0039] For example, when the specification of an information terminal as shown in drawing 3 is transmitted to information offer equipment 12 with the information offer demand which requires a static image A, the purport whose class of data before conversion is a static image A, and the purport whose format of the data after conversion is the specification of the information terminal shown in drawing 3 are outputted to the accounting Management Department 105 as accounting information from the data-conversion section 104.

[0040] Drawing 4 is drawing showing an example of the accounting data table stored in the accounting database 106 of information offer equipment, and the

accounting Management Department 105 computes the amount of accounting by determining the minimum charge to the class of data to transmit, and the transmitting formal tariff according to the data format of the data concerned based on the accounting data table shown in drawing 4 , and adding said minimum charge and said transmitting formal tariff. That is, the amount of accounting turns into a frame which added transmitting formal tariff OO corresponding to the specification of the information terminal shown in drawing 3 to minimum charge O- corresponding to a static image A.

[0041] in addition, a value not necessarily forward in a transmitting formal tariff -- it is not necessary to be -- for example, -- low -- since the amount of data which transmits to the data before conversion becomes less when it changes into an image quality image, the transmitting formal tariff of a negative value may be set up and the amount of accounting in this case turns into a low amount of money from said minimum charge. Then, the accounting Management Department 105 collects the amount of accounting from the user who is using the information terminal using approaches, such as electronic banking.

[0042] As mentioned above, according to the data distribution system concerning the gestalt 1 of this operation By transmitting the specification of an

information terminal to the information offer demand and coincidence to information offer equipment automatically, information offer equipment While becoming possible to transmit the image data corresponding to the specification of an information terminal, and music data, an information terminal It is lost that superfluous data unreproducible [with an information terminal] etc. are transmitted since the image data and music data of the optimal data format are receivable. Moreover, information offer equipment Since the amount of accounting is determined according to the data format transmitted to an information terminal, suitable accounting can be performed to an information user.

[0043] (Gestalt 2 of operation) Below, the data distribution system by the gestalt 2 of this invention is explained using drawing 7 from drawing 5 . Drawing 5 is the block diagram showing an example of the data distribution system by the gestalt 2 of operation of this invention. In addition, the data distribution system by the gestalt 2 of operation of this invention differs from the gestalt 1 of operation mentioned above only in the point of not transmitting the specification of the information terminal from the information terminal 21, when the information terminal database 202 which carries out are recording management of the

specification of an information terminal is formed in information offer equipment 22 and the specification of an information terminal is stored in this information terminal database 202. Therefore, the sign same about the same component as the gestalt 1 of operation mentioned above is attached, and explanation is omitted.

[0044] A data distribution system consists of an information terminal 21 which an information user uses, and information offer equipment 22 which distributes information to an information user in drawing 5. While the information terminal 21 can be connected with information offer equipment 22 through a communication circuit and performing the information offer demand required as distributing information, such as music data and image data, to information offer equipment 22, the information terminal ID of the information terminal 21 concerned is transmitted automatically. In addition, when the specification of the information terminal corresponding to the information terminal ID of the information terminal 11 is not registered into the information terminal database 202 of information offer equipment 22 at this time, a specification SEND statement is taken out from information offer equipment 22, and, as for the information terminal 21, the specification of the information terminal 21 is anew

transmitted to information offer equipment 22 automatically. Moreover, the information terminal 21 receives the data concerned, when the information on image data, music data, etc. demanded from information offer equipment 22 is distributed. In addition, not only the telephone line with a general communication line but various dedicated lines, ISDN circuits, etc. are included here.

[0045] Moreover, when the data with which there is information, such as the number of pixels, gradation, compressibility, the compression approach, refreshable number of sheets, and memory capacity, the specification of an information terminal, and it requires it when the data which show the format of data which the information terminal 21 requires, and require it are static-image information are dynamic-image information, there is information, such as the number of pixels, gradation, compressibility, the compression approach, playback time amount, and memory capacity. Moreover, when the data to demand are speech information, there is information, such as a sampling rate, a frequency band, compressibility, and the compression approach. In addition, the specification of these information terminals and the information terminal ID are stored in the memory (not shown) which the information terminal 21 has beforehand, and are transmitted to information offer equipment 22 if needed.

[0046] On the other hand, information offer equipment 22 consists of a receive section 201, the data detecting element 102, the data accumulation section 103, the data-conversion section 104, the accounting Management Department 105, the accounting database 106, the transmitting section 107, and an information terminal database 202.

[0047] A receive section 201 searches whether the specification of the information terminal corresponding to the information terminal ID exists from making [into a pair]-specification of information terminal [by which received the information terminal ID transmitted from the information terminal 21, and are recording management was carried out into the information terminal database 202] ID, and information terminal data while it receives an information offer demand and outputs to the data detecting element 102.

[0048] When the specification of the information terminal corresponding to the information terminal ID does not exist at this time, a specification SEND statement is performed to the information terminal 21, the specification of the information terminal transmitted from the information terminal 21 is received, and it outputs to the data-conversion section 104. On the other hand, when the specification of the information terminal corresponding to the information

terminal ID exists, the specification of the information terminal concerned is outputted to the data-conversion section 104.

[0049] The information terminal database 202 is carrying out are recording management, using the specification of the information terminal ID and an information terminal as a pair, as shown in drawing 6 . In addition, in the gestalt 2 of this operation, the specification of this accumulated information terminal ID and an information terminal shall be automatically registered by sending the specification of the information terminal 21 to an information terminal newly, and the specification of the information terminal 21 shall be determined from the specification of the registered information terminal ID and an information terminal concerned at the time of access from the next information terminal 21.

In addition, when for example, an information user joins the data distribution system concerning this invention, you may make it, register the specification of the information terminal ID and an information terminal beforehand in addition to this.

[0050] Next, actuation is explained. Below, actuation of an information offer demand and the information offer equipment started by transmitting the information terminal ID is explained from the information terminal 21 using

drawing 7 . Drawing 7 is a flow chart for explaining an example of actuation of the information offer equipment in the data distribution system by the gestalt 2 of operation of this invention.

[0051] (S201) A receive section 201 receives the information offer demand transmitted from the information terminal 21, and the information terminal ID.

[0052] (S202) After that, a receive section 201 searches whether the specification of the information terminal corresponding to the information terminal ID received in the information terminal database 202 is stored while outputting an information offer demand to the data detecting element 102. When the specification of the information terminal corresponding to the information terminal ID is stored at this time, it goes to step S203, and when not stored, it goes to step S204.

[0053] (S203) When the specification of the information terminal corresponding to the information terminal ID is stored, the specification of the information terminal concerned is detected and it outputs to the data-conversion section 104.

[0054] (S204) When the specification of the information terminal corresponding to the information terminal ID is not stored, a receive section 201 requires that a specification SEND statement should be transmitted to the information terminal

21 through the transmitting section 107, and the specification of the information terminal 21 to an information terminal should be transmitted.

[0055] In addition, if the information terminal 21 receives the specification SEND statement from information offer equipment 22 at this time, a letter will be automatically answered in the specification of an information terminal to information offer equipment 22.

[0056] (S205) A receive section 201 receives the specification of the information terminal transmitted from the information terminal 21, and outputs the specification of the information terminal concerned to the data-conversion section 104.

[0057] (S206) A receive section 201 registers with the information terminal database 202 again by making into a pair the specification of the information terminal answered to the information terminal ID and specification SEND statement which were received previously. About access after this receives the information offer equipment 22 using the information terminal 21 which has the information terminal ID concerned Without transmitting the specification of the information terminal of the information terminal 21 from the information terminal 21 information offer equipment 22 The image data and music data

corresponding to the specification of an information terminal can be transmitted, and the burden of the network required in order to transmit the specification of an information terminal to information offer equipment 22 from the information terminal 21 can be mitigated.

[0058] In addition, since actuation of step S102 to the subsequent step S107 is the same as actuation of the information offer equipment 12 explained using drawing 2 in the gestalt 1 of said operation, explanation is omitted. Moreover, since it is the same as that of what was explained in the gestalt 1 of said operation using drawing 1 , drawing 3 , and drawing 4 also about the decision method of the amount of accounting by the accounting Management Department 105 of information offer equipment 22, explanation is omitted.

[0059] According to the data distribution system concerning the gestalt 2 of this operation, as mentioned above, information offer equipment While becoming possible to transmit the image data corresponding to the specification of an information terminal, and music data, an information terminal It is lost that superfluous data unreproducible [with an information terminal] etc. are transmitted since the image data and music data of the optimal data format are receivable. Moreover, information offer equipment Since the amount of

accounting is determined according to the data format transmitted to an information terminal, suitable accounting can be performed to an information user.

[0060] Furthermore, since the specification of the information terminal concerned can be specified using the information terminal ID transmitted from an information terminal when information offer equipment is equipped with an information terminal database according to the data distribution system concerning the gestalt 2 of this operation, when accessing information offer equipment from an information terminal, it becomes unnecessary to transmit the specification of an information terminal, and a network load decreases each time.

The latency time required by this in order to transmit the specification of an information terminal can be abolished, and it enables an information user for quickly required information to come to hand.

[0061] (Gestalt 3 of operation) Below, the data distribution system by the gestalt 3 of this invention is explained using drawing 11 from drawing 8 . Drawing 8 is the block diagram showing an example of the data distribution system by the gestalt 3 of operation of this invention. In addition, the data distribution system by the gestalt 3 of operation of this invention In information offer equipment 32,

the customer database 303 which carries out are recording management of an information user's use hysteresis is formed. The accounting information which is the information about the contents of data which the accounting Management Department 302 transmits to the information terminal 11 on the occasion of accounting to an information user, And the amount of accounting is determined based on the use hysteresis information which is an information user's use hysteresis stored in the customer database 303, and it differs from the gestalt 1 of operation mentioned above only in the point of charging to an information user. Therefore, the sign same about the same component as the gestalt 1 of operation mentioned above is attached, and explanation is omitted.

[0062] A data distribution system consists of an information terminal 31 which an information user uses, and information offer equipment 32 which distributes information to an information user in drawing 8 . While transmitting the information offer demand required as the information terminal 31 being connected with information offer equipment 32 through a communication line, and distributing information, such as music data and image data, to information offer equipment 32, the customer ID who identifies the specification and information user of the information terminal concerned is automatically

transmitted to information offer equipment 32. Moreover, the data concerned are received when the information on image data, music data, etc. demanded from information offer equipment 32 is distributed. In addition, not only the telephone line with a general communication line but various dedicated lines, ISDN circuits, etc. are included here.

[0063] moreover, when the data which show the format of data which the information terminal 31 requires, and require it are static-image information, the specification of an information terminal When the data which have and require information, such as the number of pixels, gradation, compressibility, the compression approach, refreshable number of sheets, and memory capacity, are dynamic-image information When the data which have and require information, such as the number of pixels, gradation, compressibility, the compression approach, playback time amount, and memory capacity, are speech information, it has information, such as a sampling rate, a frequency band, compressibility, and the compression approach.

[0064] In addition, the specification and Customer ID of these information terminals are stored in the memory (not shown) which an information terminal has beforehand, and are automatically transmitted to information offer

equipment 32 at the time of transmission of an information offer demand.

[0065] On the other hand, information offer equipment 32 consists of a receive section 301, the data detecting element 102, the data accumulation section 103, the data-conversion section 104, the accounting database 106, the transmitting section 107, and the accounting Management Department 302 and a customer database 303.

[0066] A receive section 301 receives the specification of the information offer demand transmitted from the information terminal 11, and an information terminal, and Customer ID, and the specification of an information terminal is outputted to the data-conversion section 104, and it outputs Customer ID for an information offer demand to the data detecting element 202 at the accounting Management Department 302, respectively.

[0067] The use hysteresis information which is an information user's use hysteresis that the accounting Management Department 302 was stored in the customer database 303, And the class and the amount of data of data before the conversion outputted from the data-conversion section 104, It is the information about the contents of data transmitted to the information terminals 11, such as a format of the data after conversion, and use time. Based on the accounting

information which is the information used for the decision of the amount of accounting, the amount of accounting is determined and the amount of accounting is collected from the information user who is using the information terminal 31 using approaches, such as electronic banking.

[0068] In addition, if use hysteresis information is the hysteresis of the information relevant to accounting to an information user, for example, the class of offer data, the format of offer data, use time, the amount of accounting, etc. are the hysteresis of the information relevant to accounting to an information user, it is good anything here.

[0069] Moreover, the accounting Management Department 302 registers the information about the accounting concerned into a customer database 303 as an information user's use hysteresis information identified by the customer ID outputted from the receive section 301, after charging to an information user. A customer database 303 makes a pair the customer ID who identifies the information user registered by the accounting Management Department 302, and said accounting hysteresis information, and is carrying out are recording management.

[0070] Next, actuation is explained. Below, actuation of the specification of an

information offer demand and an information terminal and the information offer equipment 32 started by transmitting Customer ID is explained from the information terminal 31 using drawing 9. Drawing 9 is a flow chart for explaining an example of actuation of the information offer equipment in the data distribution system by the gestalt 3 of operation of this invention.

[0071] (S301) A receive section 301 receives the specification of the information offer demand from the information terminal 31, and an information terminal, and Customer ID. At this time, the specification of an information terminal is outputted to the data-conversion section 104, and Customer ID is outputted for the information offer demand transmitted from the information terminal 31 to the data detecting element 102 at the accounting Management Department 302, respectively.

[0072] (S102) Based on the information offer demand transmitted from the information terminal 11, from the inside of the data accumulation section 103, the information detecting element 102 searches the data corresponding to an information offer demand, and outputs the data corresponding to the information offer demand which searched to the data-conversion section 104.

[0073] (S103) The data-conversion section 104 judges whether it has agreed

with the specification of the information terminal with which the format of the data detected by the information detecting element 102 and the data detected by the information detecting element 102 using the specification of the information terminal received by the receive section 101 was received by the receive section 101. Consequently, if it has agreed with the specification of an information terminal and will not have gone and agreed to step S104, it goes to step S105.

[0074] (S104) When the format of the detected data has agreed with the specification of an information terminal, while outputting the data concerned to the transmitting section 107 as it is, the accounting information which is the information about the contents of data transmitted to the information terminal 11 is outputted to the accounting Management Department 302.

[0075] (S105) When the format of the detected data has not agreed with the specification of an information terminal, the data concerned are changed into the data format which agrees with the specification of an information terminal, and while outputting the changed data to the transmitting section 107, the accounting information which is the information about the contents of data transmitted to the information terminal 11 is outputted to the accounting Management Department 302.

[0076] (S302) Based on said accounting hysteresis information of the information user stored in the customer database 303, and said accounting information outputted from the data-conversion section 104, the accounting Management Department 302 determines the amount of accounting, and performs accounting collected from an information user slack user using approaches, such as electronic banking. In addition, the accounting by this step S302 is explained to the below-mentioned detail.

[0077] (S107) The transmitting section 107 transmits the data corresponding to the specification of the information terminal outputted from the data-conversion section 104 to the information terminal 11.

[0078] (S303) The accounting Management Department 302 judges whether the customer ID outputted from the receive section 301 is stored in the customer database 303 again. When the customer ID outputted from the receive section 301 is stored in the customer database 303 at this time, it goes to step S304, and when Customer ID is not stored in the customer database 303, it goes to step S305.

[0079] (S304) When the customer ID outputted from the receive section 301 is stored in the customer database 303, the accounting Management Department

302 adds the use hysteresis information which is the information about accounting performed by S302 this time to the use hysteresis information stored in Customer ID and the pair by carrying out, and ends processing to it.

[0080] (S305) When the customer ID outputted from the receive section 301 is not stored in the customer database 303, the accounting Management Department 302 stores in a customer database 303 by making into a pair the use hysteresis information and Customer ID who are the information about accounting performed by S302, and ends processing.

[0081] Next, the accounting shown at step S302 in drawing 9 is explained using drawing 10 and drawing 11. Drawing 10 is a flow chart for explaining an example of the accounting by the accounting Management Department 302 of the information offer equipment 32 in the gestalt 3 of operation of this invention.

[0082] (S401) The accounting Management Department 302 acquires the accounting information outputted from the data-conversion section 104.

[0083] (S402) The accounting Management Department 302 acquires the customer ID outputted from the receive section 301.

[0084] (S403) The accounting Management Department 302 searches whether the use hysteresis information corresponding to the customer ID concerned is in

a customer database 303 using the customer ID who acquired at step S402. Consequently, when there is use hysteresis information corresponding to Customer ID, it goes to step S404, and when there is no use hysteresis information corresponding to Customer ID, it goes to step S410. In addition, drawing 11 is drawing showing an example of the Customer ID and use hysteresis information which were stored in the accounting database, and Customer ID and use hysteresis information are registered as a pair so that it may illustrate.

[0085] (S404) The accounting Management Department 302 acquires the use hysteresis information concerned, when there is use hysteresis information corresponding to Customer ID.

[0086] (S405) Next, the accounting Management Department 302 compares the use hysteresis information acquired at step S404 with the accounting information acquired at step S401.

[0087] (S406) At this time, the accounting Management Department 302 judges whether the class of data before the data-format conversion demanded this time shown by accounting information is the same as the class of data before the data-format conversion included in use hysteresis information. Consequently,

when the class of data before the data-format conversion demanded this time is the same as what is contained in use hysteresis information, it goes to step S407, and in differing, it goes to step S410.

[0088] (S407) the format of the data after the data-format conversion the format of data demanded this time the accounting Management Department 302 shown by accounting information when the class of data before the data-format conversion demanded this time is the same as what is contained in use hysteresis information is indicated to be using the use hysteresis information that it corresponds -- low quality -- or -- said -- quality is judged. consequently, the format of data by which the format of data demanded this time is shown using use hysteresis information -- low quality -- or -- said -- in quality, it goes to step S408, and in being quality, it goes to step S409.

[0089] (S408) the format of data that the format of data demanded this time is included in use hysteresis information -- low quality -- or -- said -- in quality, it does not perform accounting to an information user noting that the accounting Management Department 302 already has a royalty to an information user to the data demanded this time.

[0090] (S409) When the format of data demanded this time is more nearly

quality than the format of the data contained in use hysteresis information The format of the data after conversion of this time when the accounting Management Department 302 is included in accounting information, And based on the format of the data after the conversion included in use hysteresis information, the difference of the amount of accounting produced according to the difference of a data quality is charged as the amount of accounting to an information user from the accounting data table stored in the accounting database 106.

[0091] (S410) A data demand of this information user determines the amount of accounting using the accounting data table stored in the accounting database 106 based on accounting information like the decision method of the amount of accounting explained with the gestalt 1 of said operation, and is charged to an information user noting that the information which the information user used before is the demand of different data.

[0092] In addition, the accounting explained using said drawing 10 The use hysteresis information that are an example to the last and the accounting Management Department 302 was stored in the customer database 303, And the amount of accounting is determined based on the accounting information

outputted from the data-conversion section 104. In transmitting the version updater of data which already transmitted from information offer equipment that what is necessary is just what is charged to an information user the difference required for a version updater to the already transmitted data -- data -- transmitting -- the difference concerned which transmitted -- there is charging only the amount of accounting to data etc.

[0093] As mentioned above, according to the data distribution system concerning the gestalt 3 of this operation By transmitting the specification of an information terminal to the information offer demand and coincidence to information offer equipment automatically, information offer equipment While becoming possible to transmit the image data corresponding to the specification of an information terminal, and music data, an information terminal It is lost that superfluous data unreproducible [with an information terminal] etc. are transmitted since the image data and music data of the optimal data format are receivable. Moreover, information offer equipment Since the amount of accounting is determined according to the data format transmitted to an information terminal, suitable accounting can be performed to an information user.

[0094] Furthermore, according to the data distribution system concerning the gestalt 3 of this operation, when information offer equipment is equipped with a customer database The amount of accounting can be determined using the use hysteresis information which is an information user's use hysteresis stored in the customer database concerned. When the same image data and music data come to hand in a different data format using the information terminal with which the same customers differ especially, since the corresponding optimal tariff can be charged, it will become very suitable.

[0095]

[Effect of the Invention] According to the data distribution system of this invention, by transmitting the specification of an information terminal to the information offer demand and coincidence to information offer equipment automatically as mentioned above, information offer equipment While becoming possible to transmit the image data corresponding to the specification of an information terminal, and music data, an information terminal It is lost that superfluous data unrepeatable [with an information terminal] etc. are transmitted since the image data and music data of the optimal data format are receivable. Moreover, information offer equipment Since the amount of accounting is determined

according to the data format transmitted to an information terminal, suitable accounting can be performed to an information user.

[0096] Moreover, since the specification of the information terminal concerned can be specified using the information terminal ID transmitted from an information terminal when information offer equipment is equipped with an information terminal database according to the data distribution system of this invention, when accessing information offer equipment from an information terminal, it becomes unnecessary to transmit the specification of an information terminal, and a network load decreases each time. The latency time required by this in order to transmit the specification of an information terminal can be abolished, and it enables an information user for quickly required information to come to hand.

[0097] Moreover, the amount of accounting can determine using the use hysteresis information which is an information user's use hysteresis which according to the data distribution system of this invention is stored in the customer database concerned when information offer equipment is equipped with a customer database, and when the same image data and music data come to hand in a different data format using the information terminal with which the

same customers differ especially, since the corresponding optimal tariff can be charged, it will become very suitable.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing an example of the data distribution system by the gestalt 1 of operation of this invention.

[Drawing 2] It is the flow chart which shows an example of actuation of the information offer equipment in the data distribution system by the gestalt 1 of operation of this invention.

[Drawing 3] It is drawing showing an example of the specification of an information terminal.

[Drawing 4] It is drawing showing an example of the data stored in the accounting database of the information offer equipment by the gestalt 1 of operation of this invention.

[Drawing 5] It is the block diagram showing an example of the data distribution system by the gestalt 2 of operation of this invention.

[Drawing 6] It is drawing showing an example of the data stored in the information terminal database of the information offer equipment by the gestalt 2 of operation of this invention.

[Drawing 7] It is the flow chart which shows an example of actuation of the information offer equipment in the data distribution system by the gestalt 2 of operation of this invention.

[Drawing 8] It is the block diagram showing an example of the data distribution system by the gestalt 3 of operation of this invention.

[Drawing 9] It is the flow chart which shows an example of actuation of the information offer equipment in the data distribution system by the gestalt 3 of operation of this invention.

[Drawing 10] It is the flow chart which shows an example of the accounting of the information management equipment in the data distribution system by the gestalt 3 of operation of this invention.

[Drawing 11] It is drawing showing an example of the data stored in the customer database of the information offer equipment by the gestalt 3 of operation of this invention.

[Description of Notations]

11, 21, 31 Information terminal

12, 22, 32 Information offer equipment

101, 201, 301 Receive section

102 Data Detecting Element

103 Data Accumulation Section

104 Data-Conversion Section

105 304 Accounting Management Department

106 Accounting Database

107 302 Transmitting section

202 Information Terminal Database

303 Customer Database